THREE NEW SPECIES OF NECTANDRA FROM THE VENEZUELAN GUAYANA¹

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ABSTRACT

Three new species of Nectandra from the Venezuelan Guayana are described in advance of a complete monograph of the genus.

During work towards a monograph of the genus Nectandra, several undescribed species were found. Three of these occur within the area of the Flora of the Venezuelan Guayana, currently in preparation at the Missouri Botanical Garden. Since the treatment of the Lauraceae for this flora is scheduled to appear before the monograph of Nectandra will be completed, the new species are published here in anticipation of the more complete work.

All three new species are somewhat similar to Nectandra globosa (Aubl.) Mez, and two of them seem to be closely related to it. They differ from N. globosa and from each other mainly by striking characters of the indumentum in addition to less conspicuous differences in venation, leaf shape, flowers, and fruits. While any one of these characters alone would hardly warrant recognition on the specific level, their combination makes the entities described below quite distinct.

Nectandra aurea Rohwer, sp. nov. TYPE: Venezuela. Apure: Dtto. San Fernando, mouth of the Río Arauca at its intersection with the Río Orinoco, 66°36′W, 7°24′N, 35 m, 14–15 May 1977 (fl, immature fr), Davidse & González 13215 (holotype, MO). Figure 1.

Arbor, ad 15 m alta. Ramuli novelli ± angulati vel longitudinaliter exarati, dense rufo- vel aurantio-tomentosi, vetustiores teretes, dense griseo-tomentelli, demum tarde glabrescentes. Folia alterna, lanceolata vel raro lanceolato-elliptica, (7–)9–17(–19) cm longa, 2.8–5(–6) cm lata, nervis lateralibus utroque costae latere 5–7(–9) sub angulo 35–50° prodeuntibus, in sicco rigide chartacea vel subcoriacea, laevia, apice in acumen angustata, basi acuta

margine (sub)plano, folia novella supra ± dense et molliter (sed plerumque inconspicue) flavido-tomentella, subtus dense et ± adpresse aureo-sericeo-tomentella, raro axillis nervorum rufo-tomentosa, vetustiora supra praeter costam leviter pubescentem glabrescentia, subtus indumento fere persistente vel tarde deminuente sed demum sparso. Inflorescentiae axillares, breviter thyrsoideae, 2-5(-9) cm longae, pedunculo 1-2(-3) cm longo, dense rufo- vel aurantio-tomentosae, cymis lateralibus 2-4, 1-3(-4)-furcatis. Pedicelli 0.5-2.5 mm longi. Flores 5-8(-9.5) mm diametro. Tepala elliptica, intus papillosa, exteriora interioribus paulo majora, ad 4 mm longa. Stamina papillosa, subsessilia, 0.7-0.9 mm longa, exteriores 6 late pentagona vel quadrato-rhombica, apice paulo producto, obtuso vel late subrotundato, serie prima secunda plerumque paulo latiora, interiores 3 apice late rotundata vel paene truncata. Staminodia parva sed crassiuscula, apice papillosa, inter stamina seriei tertiae ± celata et basi eis connata. Pistillum ± gracile, glabrum, 1.5-2 mm longum, stylo crasso ovarium ± aequante. Receptaculum profunde urceolatum, intus (interdum parce modo et inaequaliter) adpresse pubescens. Fructus (non nisi immaturus notus) ovato-ellipticus. Cupula profunda, campanulata, iam ca. 11 mm diametro et 9 mm profunda, margine integro.

Tree to 15 m. Twigs at first ± angular or longitudinally furrowed, densely covered with curled reddish longer hairs (0.5–1.5 mm long) over an extremely dense layer of very short yellowish hairs, older twigs roundish with the short hairs persistent for a long time and becoming grayish. Leaves alternate, lanceolate or rarely lanceolate-elliptic, (7–)9–17(–19) cm long, 2.8–5(–6) cm wide, with 5–7(–9) pairs of lateral veins diverging at 35–50°, dried laminae stiffly chartaceous to subcoriaceous, smooth (secondaries slightly prominent below), the apex tapering towards a narrow acumen, the base acute, flat or nearly so, young leaves above ±

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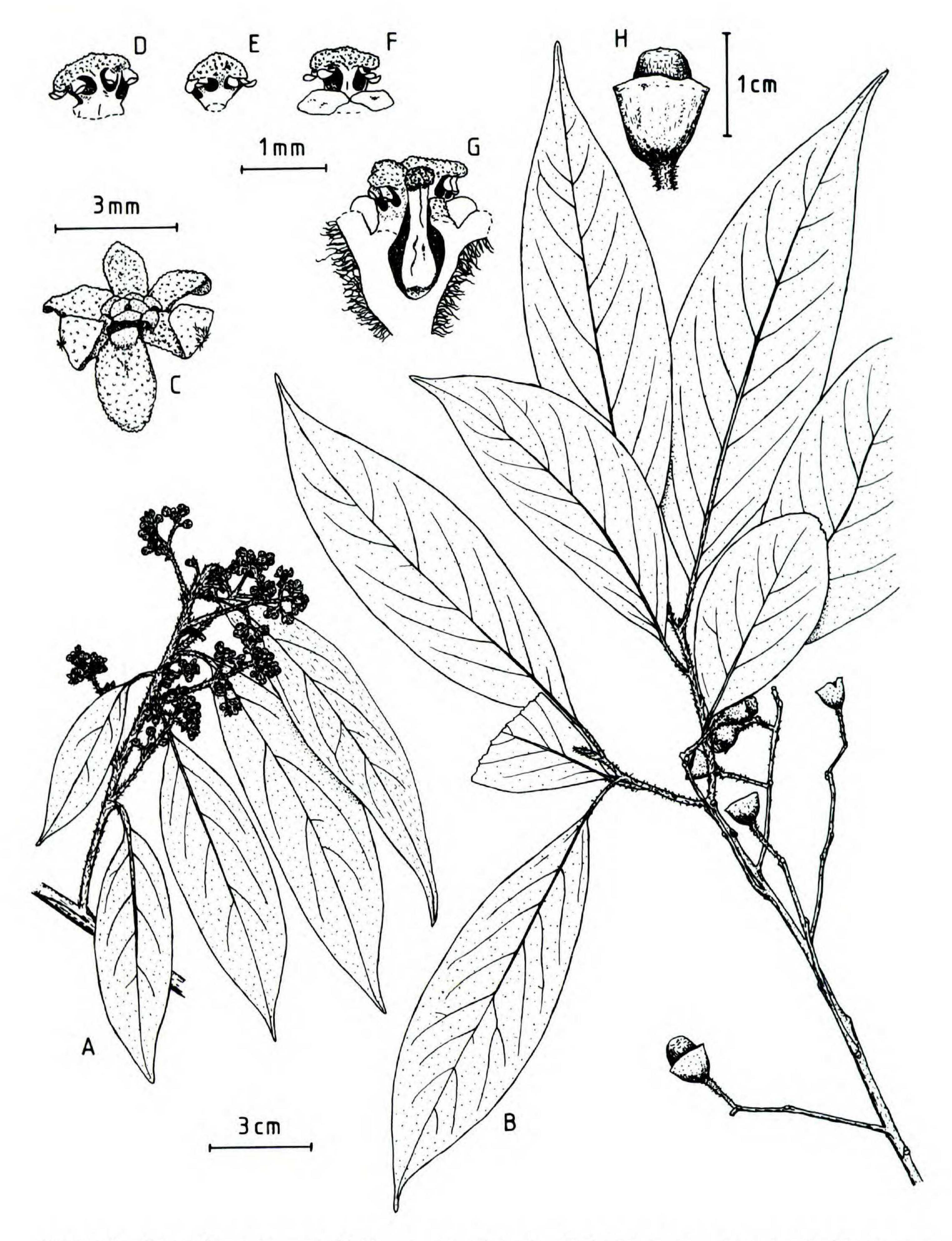


Figure 1. Nectandra aurea.—A. Habit, flowering branch.—B. Habit, fruiting branch.—C. Flower, seen obliquely from above.—D. Stamen of the first whorl, seen from inside.—E. Stamen of the second whorl, seen from inside.—F. Stamen of the third whorl, seen from outside.—G. Receptacle with ovary, staminode, and two inner stamens, cut open, tepals and outer stamens removed.—H. Fruit. Vouchers: A, Davidse & González 14492; B-H, Davidse & González 13215.

densely yellowish pubescent (often inconspicuous but soft to the touch), below densely and often shining golden-pubescent, hairs predominantly appressed but with a few ± erect reddish hairs, these rarely forming indistinct tufts in the vein axils, older leaves above glabrescent except for some hairs on midrib, below with an almost persistent indumentum, or very slowly subglabrescent. Inflorescences short thyrsoids, axillary to distal leaves or occasionally some of them axillary to cataphylls below the terminal bud, covered with the same kind of indumentum as the young twigs, 2-5(-9) cm long with a peduncle of 1-2(-3) cm, with 2-4lateral cymules below a terminal cluster of cymules, the cymules branched 1-3(-4) times. Pedicels 0.5-2.5 mm long. Flowers 5-8(-9.5) mm diam. Tepals elliptic, up to 4 mm long, papillose on the inside, the outer ones slightly larger than the inner ones. Stamens papillose, subsessile, 0.7-0.9 mm long, the outer 6 broadly pentagonal to broadly rhombic, with a slightly prolonged, broadly triangular, obtuse to almost rounded apex, those of the first whorl (opposite the outer tepals) usually slightly wider than those of the second whorl, the 3 inner stamens broadly rounded to almost truncate at the apex. Staminodes small but thickish, papillose at the tip, hidden between the stamens of the third whorl and united with them at the very base. Pistil ± slender, glabrous, 1.5-2 mm long, the style relatively thick and about as long as the ovary. Receptacle deeply urceolate, on the inside covered with tightly appressed hairs (sometimes only in patches). Fruit (known only immature) ovoid-elliptic, its cupule deep, campanulate, already about 11 mm diam. and 9 mm deep, with an entire margin.

Additional specimens examined. VENEZUELA. APURE: Dtto. San Fernando, banks of the Río Arauca, 5 km directly (in a straight line) SW of El Faro, 7°19′N, 66°54′W, 35 m, 18–19 May 1977 (fl), Davidse & González 13412 (MO); Dtto. Pedro Camejo, banks of the Río Orinoco, opposite Isla Pantallo, 48 airline km NE of Puerto Páez, 6°13′N, 67°09′W, 40 m, 24–25 Feb. 1978 (fl), Davidse & González 14492 (MO). BOLÍVAR: Dtto. Cedeño, ± 20 km al E de Túriba, 6–11 Dec. 1970 (fl), Marcano-Berti 2595 (MER); margen del Caura, Temblador, 100 m, 28 Mar. 1939 (fl), Ll. Williams 11612 (F, US); Las Trincheras, 80 m, 11 June 1984 (fl, immature fr), S. López P. et al. 4598 (NY); same data, (fl), S. López P. et al. 4664 (NY).

Nectandra aurea is a small to medium-sized tree of gallery forest formations on the banks of the Orinoco River and its tributaries. It is easily recognized by the characteristic pubescence on young leaves, young twigs, and inflorescences. The

tertiary venation is rather inconspicuous above and below, and the young leaves tend to dry with a much lighter and more yellowish color than the mature leaves, which dry medium brown above. The deep campanulate cupule is also quite unusual, but it seems to become wider towards maturity and therefore may not be a reliable specific character.

Allen (1964) cited the collection Williams 11612 under N. pisi Miq. (= N. globosa (Aubl.) Mez). With only this specimen at hand, one might indeed think of it as an unusually hairy variant of N. globosa. In that species, however, the leaves are generally more elliptic and much wider when mature, the veins are more distinct, and the immature cupules are constricted, not expanded towards the margin.

Nectandra fulva Rohwer, sp. nov. TYPE: Venezuela. Amazonas: Dep. Río Negro, 0–1 km E of Cerro de Neblina Base Camp on Río Mawarinuma, 140 m, 0°50′N, 66°10′W, 27 Nov. 1984 (fl, fr), Liesner & Kral 17338 (holotype, MO). Figure 2.

Arbor, ad 20 m alta (raro frutex). Ramuli novelli ± angulati, apice ipso ± dense cupreo-subtomentosi, celeriter autem densitate indumenti deminuente, nigricantes. Folia alterna, (ob)lanceolato-oblonga vel (ob)lanceolatoelliptica, raro elliptica, 12-26 cm longa, 3.3-8.5 cm lata, nervis lateralibus utroque costae latere (6-)7-9(-10) sub angulo 50-55(-65)° prodeuntibus, in sicco rigide chartacea, supra plerumque nervis paulo impressis venulis parum elevatis, subtus costa nervisque prominentibus venulis paulo elevatis, apice acuminata, basi acuta vel subcuneata, basi ipsa autem plerumque paulo producta, margine plano, folia novella (si circa anthesin pullulantia) supra dense et molliter flavido- vel fulvo-tomentella, subtus parce et inconspicue puberula sed costa nervisque pilis aliquantum majoribus rufescentibus praedita, vetustiora utrinque (supra primum interveniis) subglabrescentia. Inflorescentiae axillares, laxe thyrsoideae, 7-12(-15) cm longae, pedunculo 3.5-6(-7.5) cm longo, pedunculo modice cupreo- et floribus dense flavido-tomentellae, cymis lateralibus (2-)4(-6), 2-4-furcatis. Pedicelli 3.5-7 mm longi. Flores (7-)9-10 mm diametro. Tepala elliptica vel anguste-elliptica, intus papillosa, aequalia vel exteriora interioribus aliquantum majora, ad 4.5 mm longa. Stamina papillosa, 0.9-1.4 mm longa, filamentis brevissimis, serie prima suborbicularia vel late rhomboidea apice rotundato vel obtuso, serie secunda paulo angustiora, ± ovata vel trullata apice acuto vel parabolico, serie tertia ± rectangularia, apice truncata vel late rotundata. Staminodia parvula sed crassiuscula, apice papillosa, inter stamina seriei tertiae ± celata et basi eis connata. Pistillum elongatum, 1.7-2.7 mm longum, stylo papilloso ovarium glabrum ± aequante. Receptaculum profunde urceolatum, intus glabrum. Fructus (non nisi immaturus notus) oblongus vel ovato-oblongus, ca. 14 mm longus et 8 mm diametro. Cupula ± hemispherica, ca. 10 mm diametro et 5 mm profunda, margine paulo 6-dentato.

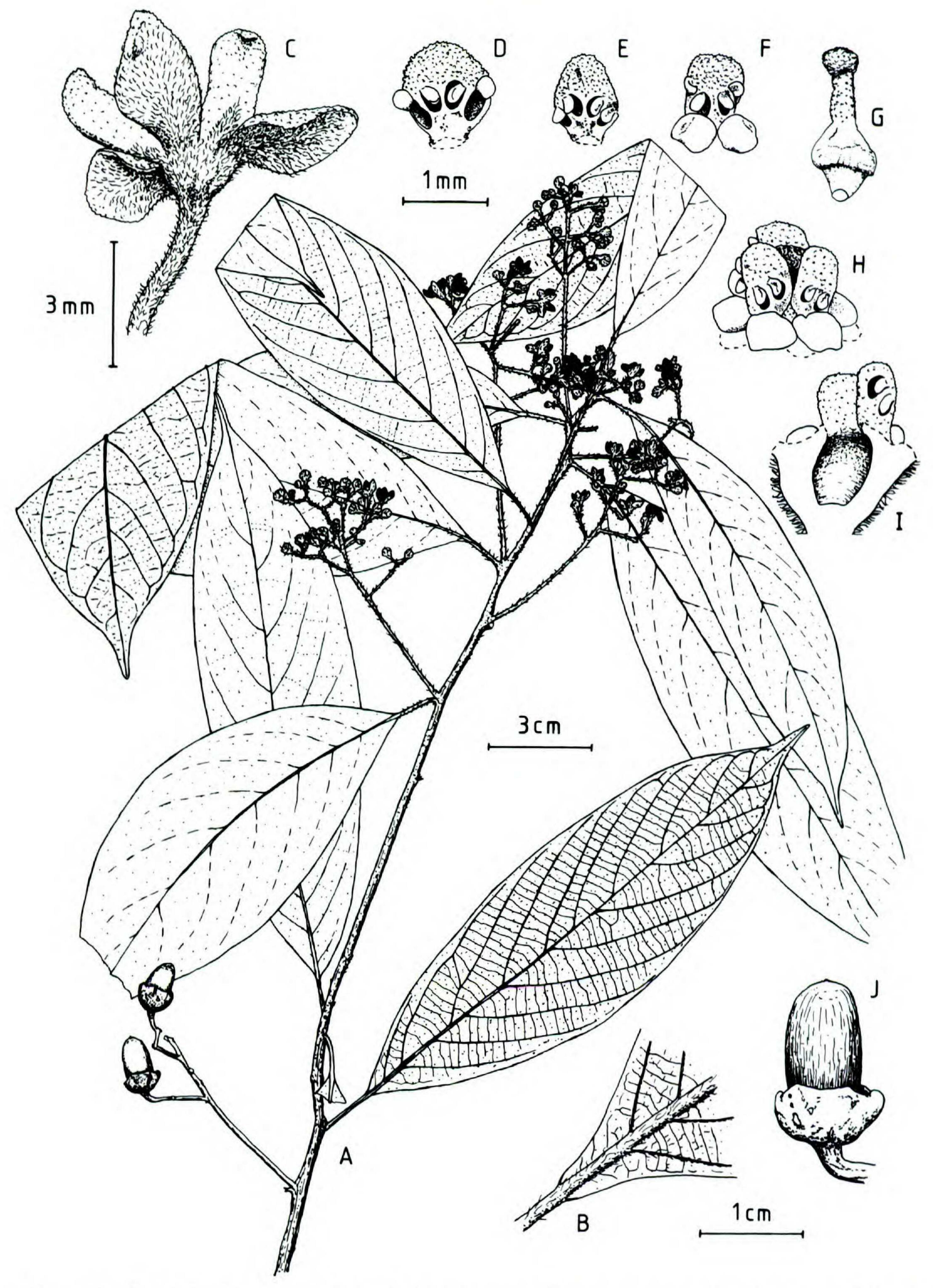


Figure 2. Nectandra fulva.—A. Habit.—B. Leaf base.—C. Flower, seen from side.—D. Stamen of the first whorl, seen from inside.—E. Stamen of the second whorl, seen from inside.—F. Stamen of the third whorl, seen from outside.—G. Ovary.—H. Stamens of the third whorl, with stigma and staminode between them, glands and scars of outer stamens at the periphery.—I. Receptacle with two inner stamens, cut open; tepals, outer stamens, and ovary removed; semischematic.—J. Fruit. Vouchers: A, C-J, Liesner & Kral 17338; B, Gentry & Stein 46954.

Tree (rarely shrub) to 20 m. Twigs at first ± angular, immediately below the terminal bud with a relatively dense copper-colored indumentum of very short to moderately long (ca. 1 mm) curled to almost straight hairs, these quickly becoming sparser below the tip and revealing the blackish epidermis. Leaves alternate, (ob)lanceolate-oblong to (ob)lanceolate-elliptic, rarely elliptic, 12–26 cm long, 3.3-8.5 cm wide, with (6-)7-9(-10) pairs of lateral veins diverging at 50-55(-65)°, dried laminae stiffly chartaceous, above usually with the secondary veins slightly impressed and the tertiary veins very slightly raised, below with midrib and secondaries prominent and the tertiary veins noticeably raised, ± at right angles to the secondary veins, the apex acuminate, the base acute or almost cuneate, at the very base often extended into a short projection along the petiole, margin flat; young leaves (only those developed around flowering time, see below) very densely covered above with predominantly short strongly curled yellowish hairs, soft to the touch, below with a (moderately) sparse indumentum of short appressed hairs between the secondary veins and slightly longer more reddish curled hairs on the veins, the indumentum of older leaves first worn off between the secondary veins above, later slowly subglabrescent. Inflorescences ± lax thyrsoids, axillary to distal leaves, 7-12 (-15) cm long with a peduncle of 3.5-6(-7.5) cm, this with a moderately dense to sparse indumentum similar to that of the twigs, becoming shorter, denser and more yellowish towards the flowers, with (2-)4(-6) lateral cymules below the terminal cymule or cluster of cymules, the cymules branched 2-4 times. Pedicels 3.5-7 mm long. Flowers (7-)9-10 mm diam. Tepals elliptic to elongateelliptic, up to 4.5 mm long, papillose on the inside, ± equal or the outer ones somewhat larger than the inner ones. Stamens papillose, 0.9-1.4 mm long, with very short filaments, these in the outer whorls sometimes adnate to the tepals, the stamens of the first whorl suborbicular to broadly rhomboid, with a rounded or obtuse tip, those of the second whorl slightly narrower, ± ovate to slightly angular, with an acute to parabolic tip, the third whorl almost rectangular, truncate to broadly rounded at the apex. Staminodes very small but thickish, papillose at the tip, hidden between the stamens of the third whorl and basally united with them. Pistil elongate, 1.7-2.7 mm long, the style papillose and about as long as the glabrous ovary. Receptacle deeply urceolate, glabrous on the inside. Fruit (known only immature) elongate to ovoid-elongate, its cupule nearly hemispherical, ca. 10 mm diam. and 5 mm deep, with a tendency to develop 6

thick teeth on the margin, each corresponding to the midvein of a tepal.

Additional specimens examined. VENEZUELA. AMAZONAS: Dep. Río Negro, Neblina Base Camp on the Río Mawarinuma, 0°50'N, 66°10'W, 140 m, 17 July 1984 (fl), Davidse & Miller 27417 (MO); same data, 120 m, 17 July 1984 (fl), Davidse 27520 (MO); Cerro Neblina, between base camp and Puerto Chimo along Río Mawarinuma, 150-180 m, 0°50'N, ca. 66°08'W, 26 Apr. 1984 (fl), Gentry & Stein 46954 (MO); upstream end of large island in Río Mawarinuma just upstream from Neblina Base Camp, 0°50'N, 66°10'W, 160 m, 27 Nov. 1984 (fl, immature fr), Kral 71844 (MO); 1-3 km E of Cerro de Neblina Base Camp on Río Mawarinuma, 140 m, 0°50'N, 66°10'W, 8 Feb. 1984 (immature fr), Liesner 15739 (MO); same data (post fl), Liesner 15755 (MO); along Río Mawarinuma, 0-5 km E of Cerro de La Neblina Base Camp, 140 m, 0°50'N, 66°10'W, 10 Mar. 1984 (immature fr), Liesner & Funk 16521 (MO); along Río Mawarinuma, 2-6 km E of Base Camp, between Base Camp and "Puerto Chimo" camp, 160 m, 0°50'N, 66°08'W, 26 Apr. 1985 (fl), Thomas 3189 (MO, NY, US).

Nectandra fulva is known from only one population near the Neblina Base Camp on the Río Mawarinuma. The tendency to develop dentate or even thickly lobed cupules is a very rare character in Nectandra, and it suggests a close relationship with the group around N. acutifolia (Ruiz & Pavón) Mez. The structure of the indumentum and the presence of often distinct gland dots in the leaves further support this conclusion. Nectandra fulva differs, however, from the other species in this group (among other characters) by less elongate anthers and the lack of an inrolled leaf base.

Nectandra fulva shows an interesting dimorphism in the indumentum of leaves developed during the flowering and fruiting periods. Only those from the flowering period show the dense indumentum on the upper surface described above. In those from the fruiting period there are only somewhat curled reddish hairs, moderately dense on the major veins and sparse from the beginning between them. While these sparsely hairy new leaves are developed, some of the older ones may still show remnants of the dense indumentum developed during flowering time.

Nectandra ruforamula Rohwer, sp. nov. TYPE: Venezuela. Amazonas: 0.5 to 2 km N of San Carlos de Río Negro, ca. 20 km S of confluence of Río Negro & Brazo Casiquiare, 1°56′N, 67°03′W, 120 m, 10 May 1979 (fl), Liesner 7318 (holotype, MO). Figure 3.

Arbor, ad 10 m alta. Ramuli novelli ± angulati, dense rufo-tomentelli, vetustiores plerumque ± teretes et pilis coactis inconspicuis fumosi, demum glabrescentes (in typo

autem ramuli permanifeste angulati et pubescentia persistente). Folia alterna, elliptica vel lanceolato-elliptica, 8.5-20(-26) cm longa, 2.7-8(-10) cm lata, nervis lateralibus utroque costae latere 5-7(-9) sub angulo 35-50(-55)° prodeuntibus, in sicco subcoriacea, supra griseo-virentia vel raro olivacea, costa nervisque impressis venulis paulo impressis, subtus ± fusca, costa nervisque prominentibus venulis elevatis, apice anguste acuminata, basi acuta vel raro obtusa, basi ipsa autem plerumque angustata vel quidem paulo producta, margine subplano vel recurvulo, folia novella utrinque costa nervisque rufo-tomentella, supra interveniis glabra vel paulo pallido-tomentella, subtus indumento densiore, interveniis plerumque pilis brevibus adpressis pallidis modice sparsis et pilis crispatis ± erectis rufescentibus (ut in venis) sparsis, ventustiora supra (interdum praeter basin costae) glabrescentia, subtus subglabrescentia, pilis brevibus adpressis pallidis valde inconspicuis persistentibus. Inflorescentiae axillares, breviter et ± dense thyrsoideae, 2-7 cm longae, pedunculo 1-2.5 (-3.5) cm longo, dense rufo- vel fusco-tomentellae, cymis lateralibus (0-)2-4, 1-2(-3)-furcatis. Pedicelli 1-3 mm longi. Flores 5.5-7.5 mm diametro. Tepala elliptica, intus papillosa, aequalia vel exteriora interioribus paulo majora, ad 3.5 mm longa. Stamina papillosa, 0.7-0.9 mm longa, filamento evidente sed anthera breviore, exteriores 6 depresse obtrullata vel fere transverse elliptica, apice paulo producto obtuso, serie prima secunda plerumque paulo latiora, interiores 3 apice late rotundata vel paene truncata. Staminodia parva sed crassiuscula et paulo capitata, intrinsecus paulo glandulosa, extrinsecus papillosa, inter stamina seriei tertiae ± celata. Pistillum crassiusculum, glabrum vel stylo aliquantum papillosum, 1.4-1.8 mm longum, stylo crasso ovario breviore. Receptaculum late urceolatum (hemisphericum sed supra staminibus staminodiisque fere praeclusum), intus glabrum vel pilis sparsis adpressis. Fructus (immaturus, ex Maguire & Politi 28001) ellipticus. Cupula profunda, subhemispherica, iam ca. 11 mm diametro et 6 mm profunda, margine integro.

Tree to 10 m. Twigs at first ± angular, densely covered with a rusty red indumentum of erect and somewhat curled longer hairs (0.3-0.8 mm) over an extremely dense layer of very short hairs, older twigs usually roundish and with much of the indumentum persistent for a long time as a matted gray layer over the epidermis, finally glabrescent (in the type collection all twigs strongly angular and covered with a dense reddish indumentum). Leaves alternate, elliptic to lanceolate-elliptic, 8.5-20(-26) cm long, 2.7-8(-10) cm wide, with 5-7(-9) pairs of lateral veins diverging at 35-50 (-55)°, dried laminae subcoriaceous, above grayish green (older leaves rarely olive), with impressed midrib and secondaries, the tertiary veins usually slightly impressed, below yellowish brown to reddish brown, midrib and secondaries prominent, the tertiary veins noticeably to distinctly raised, ± at right angles to the secondary veins, the apex narrowly acuminate, the base acute or rarely obtuse but at the very base attenuate or at least extended into a short projection along the petiole, almost flat or slightly curved downwards; young leaves on both

sides with erect curled reddish hairs on midrib and secondaries, the intercostal fields glabrous or with some paler hairs above, below indumentum denser both on veins and in the intercostal fields, the latter usually with pale, short, appressed hairs and with longer reddish hairs similar to those on the veins; older leaves glabrescent above (some hairs on base of midrib often persistent), subglabrescent below, with the inconspicuous, pale, short, appressed hairs persistent for a long time. Inflorescences short and ± dense thyrsoids, axillary to distal leaves, covered with an indumentum similar to that of the young twigs (but becoming shorter and more grayish brown towards the flowers), 2-7 cm long with a peduncle of 1-2.5(-3.5) cm, with (0-)2-4 lateral cymules below a terminal cluster of cymules, the cymules branched 1-2(-3) times. Pedicels 1-3 mm long. Flowers 5.5-7.5 mm diam. Tepals elliptic, up to 3.5 mm long, papillose on the inside, equal or the outer ones slightly larger than the inner ones. Stamens papillose, 0.7-0.9 mm long, the outer 6 with short but distinct filaments; anthers broadly obtrullate to almost transversely elliptic, with a slightly prolonged obtuse apex, those of the first whorl (opposite the outer tepals) usually slightly wider than those of the second whorl, the 3 inner stamens broadly rounded to almost truncate at the apex. Staminodes small but thickish with a small heart-shaped head, slightly glandular on the adaxial side, papillose on the abaxial side, hidden between the stamens of the third whorl. Pistil relatively stout, glabrous or somewhat papillose at the style, 1.4-1.8 mm long, the style relatively thick, reaching about ½-2/3 the length of the ovary. Receptacle broadly urceolate (hemispherical but above closed by stamens and staminodia), on the inside glabrous or with a few tightly appressed hairs. Fruit (immature, after Maguire & Politi 28001, see below) elliptic, its cupule deep, roughly hemispherical but slightly contracted at the margin, already about 11 mm diam. and 6 mm deep, with an entire margin.

Additional specimens examined. VENEZUELA. AMAZONAS: Dep. Atabapo, Cucurital de Caname, southern bank of the middle part of Caño Caname, 3°40′N, 67°22′W, 100 m, 30 Apr.-1 May 1979 (fl), Davidse et al. 17008 (MO); Río Orinoco 1-10 km below San Fernando de Atabapo, 150 m, 11 May 1954 (fl), Level 65 (F, NY, US); 4-7 km NE of San Carlos de Río Negro along road, ca. 20 km S of confluence of Río Negro & Brazo Casiquiare, 1°56′N, 67°03′W, 120 m, 19 May 1979 (fl), Liesner 7550 (MO); Río Atabapo, along Yavita-Pimichin trail near Yavita, 125-140 m, 10 June 1959 (fl), Wurdack & Adderley 42902 (MO, NY); Cerro Sipapo (Paráque), near base camp, 125 m, 28 Dec. 1948 (fr), Maguire & Politi 28001 (US).

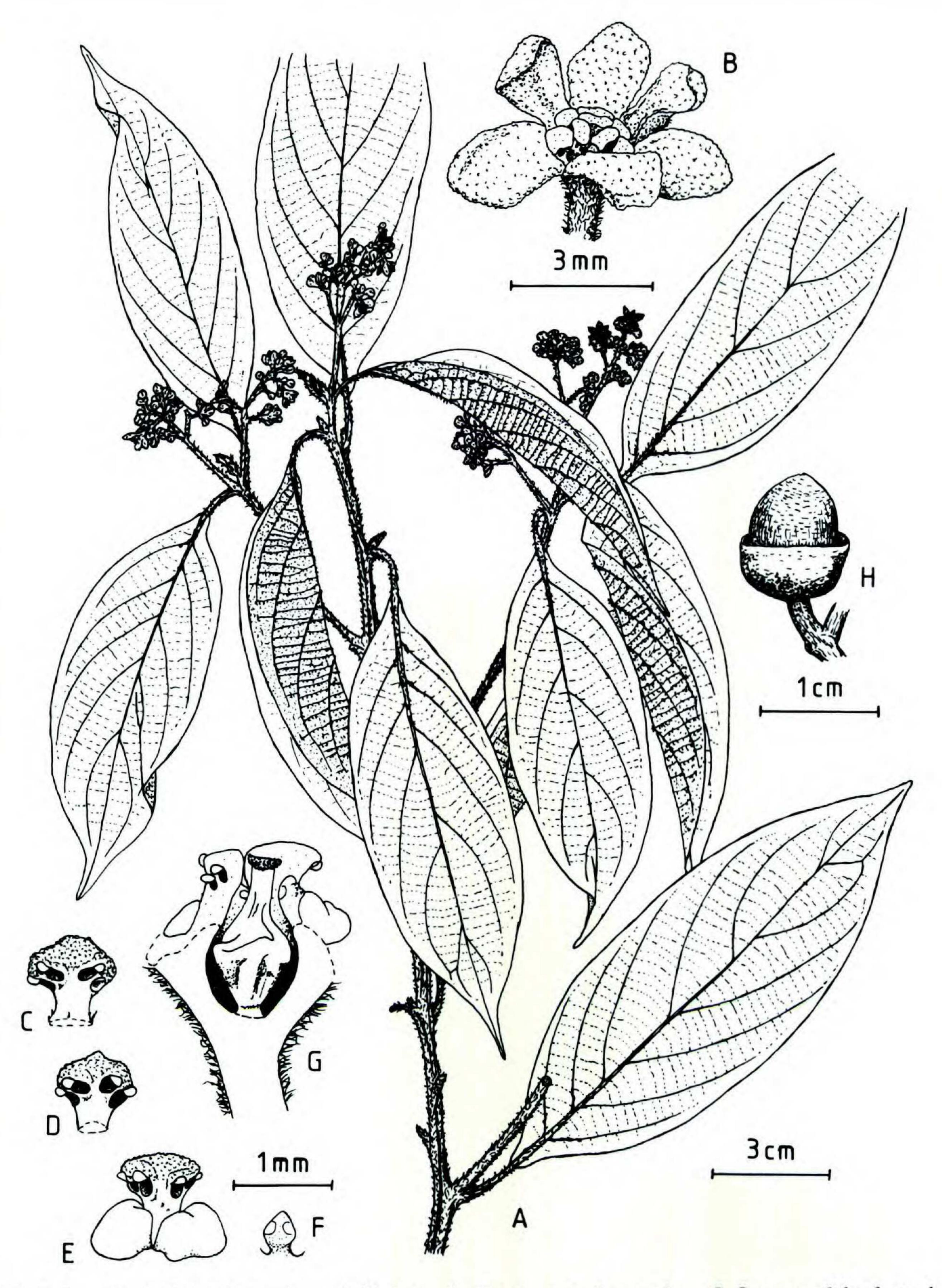


Figure 3. Nectandra ruforamula.—A. Habit.—B. Flower, seen from side.—C. Stamen of the first whorl, seen from inside.—D. Stamen of the second whorl, seen from inside.—E. Stamen of the third whorl, seen from outside.—F. Staminode with glandular patches, seen from inside.—G. Receptacle with ovary, staminode, and two inner stamens, cut open; tepals and outer stamens removed.—H. Fruit. Vouchers: A—G, Liesner 7318; H, Maguire & Politi 28001.

Nectandra ruforamula occurs in the lowland region that connects the basins of the Orinoco and the Amazon. At present it is only known from the Venezuelan side, but it is likely to occur in Colombia as well. Nectandra ruforamula is recognized mainly by its dense reddish indumentum on the young

twigs, but the leaves have a characteristic appearance, too. They usually show a marked difference between a grayish green upper surface with impressed reticulation and a reddish brown lower surface with raised reticulation.

Despite these rather obvious characters, there

is a problem with the delimitation of N. ruforamula against N. globosa (Aubl.) Mez. The type collection of N. ruforamula is not fully representative of the species but has been selected because it is so strikingly unlike any other species of Nectandra, including N. globosa. In the other collections, however, the reddish indumentum (which in the type collection covers the entire twigs) is restricted to the apical part of the branchlets. Further from the tip it quickly turns into a gray matted mass in which individual hairs can hardly be resolved, and which imperceptibly intergrades with the grayish bark still further down. Where this gray indumentum prevails over the reddish hairs, the specimens may become similar to N. globosa, and three of the collections included here (Level 65, Maguire & Politi 28001, Wurdack & Adderley 42902) have been cited under its synonym N. pisi Miq. by Allen (1964). Nectandra ruforamula is treated as a separate entity here because in *N. globosa* the tertiary reticulation is less distinct, even the youngest leaves never show erect curled reddish hairs, and the dry leaves are usually medium to dark brown on both sides.

The fruiting collection, Maguire & Politi 28001, is placed here with some doubt. It shows the characteristic color of the leaves, but it altogether lacks the reddish hairs, and the tertiary venation is somewhat less conspicuous than should be expected in leaves of this size. The indumentum, however, is lost or significantly altered with age in most species of Nectandra.

LITERATURE CITED

ALLEN, C. K. 1964. Lauraceae. In: B. Maguire et al., The Botany of the Guayana Highland, Part V. Mem. New York Bot. Gard. 10(5): 44-123.